

## AGRICULTURAL LAND CLASSIFICATION REPORT FOR LAND AT KISSES BARN FARM, TAMWORTH

### Introduction

This 16.4 ha site was visited by the Resource Planning Team in September 1992. An Agricultural Land Classification (ALC) survey was undertaken according to the guidelines laid down in the ALC Revised Guidelines/Criteria Booklet (MAFF 1988).

### Location

The site is situated to the north of the River Anker approximately one mile east of Polesworth. The land rises in altitude from 65 metres in the south near the river, to 71 metres in the north with a southwesterly aspect.

### Climate and Rainfall

The area receives an average annual rainfall (AAR) of 657mm and has an accumulated temperature above 0°C for the period January to June of 1396, which indicates that the site is climatically grade 1. Climatic interactions produce wheat and potato moisture deficits of 104mm and 94mm respectively. The number of field capacity days is 146.

### Geology and Soils

The soil parent geology of this site consists of river terraces to the west, sandstone conglomerates to the east and a veneer of alluvium on the southern periphery. These have given rise to sandy soils with occasional pockets that are clay or have gravelly subsoil horizons.

### Irrigation

Although there are signs of irrigation facilities at the site, consultation with the NRA suggests that they would not grant near abstraction licence and the former abstraction licence has lapsed.

### Land Use

At the time of the survey all land had been put to the plough. However, it is known that cereals were the last crop to be harvested.

### Agricultural Land Classification

Grade 2 occupies 2.5 ha and accounts for 15.2% of the site. It occurs in three separate areas, two of which are on the southern periphery of the site and the third is situated to the southeast of the farm itself.

Typically the latter soils are of sandy loam over loamy sand and sand at depth. The main limitation is droughtiness.

The soils to the south are clay loam/sandy loam over heavier and moderately stony material at depth. The main limitation on these areas is wetness and stoniness.

Grade 3a occupies 12.6ha and accounts for 76.9% of the site. Typically these soils are sandy loam over loamy sands and sands and occur over the majority of the site. There are occasional pockets of heavier material overlying clay to the southeast of Kisses Barn Farm. A number of profiles encountered gravelly material at depth. The main limitation is droughtiness.

Grade 3b occupies 7.2ha and accounts for 7.3% of the site. It occurs as two discrete pockets in the south west and north east.

The south westerly soils are typically clay loams over loamy sands with traces of isolated iron pan formation and relic gleying, which bare testimony to an environment with a fluctuating water table. The subsoils stone are moderately to very stony between 25-50cm in depth. Droughtiness is the main limiting factor on these soils.

The north easterly area of the site is clay loam over clay at approximately 25cm. Thus wetness is the main limitation at this point.

Grade	Area(ha)	% of Site	% of Agric Area
2	2.5	15.2	15.3
3a	12.6	76.9	77.3
3b	1.2	7.3	7.4
Not surveyed	0.1	0.6	-
	<u>16.4</u>	<u>100</u>	<u>100</u>

RESOURCE PLANNING GROUP  
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SOIL UNITS

Soils were examined using a Dutch soil auger, with borings on a 100m x 100m grid based on the OS grid. Borings were to a depth of 120cm unless prevented by stony layers. Soil pits were dug to obtain further details in relation to structure and soil volume.

Type I~~2~~ covers 7.9ha and accounts for 48.5% of the site. These are the lighter soils with 30-40cm of sandy loam topsoil over loamy sand and sand subsoils. Topsoils generally have less than 10% stones with subsoils containing up to 13% stones, except boring 13 where stone content is 26%. A typical profile is given below.

0-31cm 75YR33 medium sandy loam, weakly developed coarse subangular blocky structure, 10% rounded quartzite stone few roots,

31-39cm 5Y4344 medium sandy loam, moderately well developed coarse subangular blocky structure, few stones, few roots.

39-83cm 75YR5658 medium sand, weakly developed coarse subangular blocky, no stones, common roots and worm tubes  
83-120cm 10YR56 medium sand, weakly developed coarse subangular blocky to loose structure, no stones, few roots.

Type II covers 2.3ha and accounts for 14.1% of the site. These are markedly heavier soils with clay loams/sandy loams overlying clay at depth (28-60cm). The description below represents a typical profile.

0-40 5YR34, medium sandy loam, few quartzite stones, few roots.

40-45cm 5YR44, heavy clay loam, few stones

45-120cm 25YR46, clay

Gleyed at 40cm, SPL at 40cm, Wetness Class 3.

Type III covers 6.1ha and accounts for 37.4% of the site. These soils are of medium sandy loam/medium clay loam topsoils over sandy loam/sandy clay loam and clay at depth. Topsoils generally have less than 10% stones, with subsoil stones of approximately 25% at depth. Thus it can be seen that profiles in this soil type are of a variable nature. However, the profile below is representative of a number of those encountered.

0-35cm 5YR34, medium sandy loam, no stones, few roots.

35-62cm 5YR45, sandy clay loam, weak coarse subangular blocky structure, porous, few stones, few roots.

62-87cm 5YR54, heavy clay loam, weak coarse subangular blocky structure, non-porous, few stones, few roots.

87-120cm 75YR44, clay, weak coarse subangular block structure, non porous, very stony, no roots.

Gleyed at 62cm, SPL at 62cm, wetness Class 3.